

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 03/30581

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H02M3/335

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H02M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/172055 A1 (BALAKRISHNAN BALU ET AL) 21 November 2002 (2002-11-21) paragraph '0044! – paragraph '0103!; figures 1-7 -----	1,8,15
A	US 5 892 355 A (PANSIER FRANS ET AL) 6 April 1999 (1999-04-06) the whole document -----	1-20
A	EP 1 215 808 A (SEMICONDUCTOR COMPONENTS IND L) 19 June 2002 (2002-06-19) the whole document -----	1-20

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

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- *&* document member of the same patent family

Date of the actual completion of the International search	Date of mailing of the International search report
27 April 2004	07/05/2004
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Jonda, S

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Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 2002172055	A1 21-11-2002	US 6462971 B1		08-10-2002
		US 2003107359 A1		12-06-2003
		US 2004071001 A1		15-04-2004
		US 2002158656 A1		31-10-2002
		US 6351398 B1		26-02-2002
		US 6366481 B1		02-04-2002
		US 6313976 B1		06-11-2001
		US 6356464 B1		12-03-2002
		US 6304462 B1		16-10-2001
US 5892355	A 06-04-1999	EP 0904545 A2		31-03-1999
		WO 9843100 A2		01-10-1998
		JP 2000511285 T		29-08-2000
EP 1215808	A 19-06-2002	EP 1215808 A1		19-06-2002
		US 2002070720 A1		13-06-2002